Z-direction means in the direction of the vehicle's Z-axis, which is perpendicular to the X- and Y-axes. The Z-direction is positive in a downward direction.

[73 FR 2180, Jan. 14, 2008]

EFFECTIVE DATE NOTE: At 76 FR 47486, Aug. 5, 2011, § 563.5 was amended in paragraph (b), by revising the definitions of ''end of event time,'' ''event,'' ''occupant size classification,'' and ''time zero,'', removing the definition of ''service brake, on and off'', and adding a definition for ''service brake, on or off'', effective October 4, 2011. For the convenience of the user, the added and revised text is set forth as follows:

§ 563.5 Definitions.

* * * * *

(b) * * *

End of event time means the moment at which the resultant cumulative delta–V within a 20 ms time period becomes 0.8 km/h (0.5 mph) or less, or the moment at which the crash detection algorithm of the air bag control unit resets.

* * * * *

Event means a crash or other physical occurrence that causes the trigger threshold to be met or exceeded, or any non-reversible deployable restraint to be deployed, whichever occurs first.

* * * * *

Occupant size classification means, for the right front passenger, the classification of the occupant as a child (as defined in 49 CFR part 572, subpart N or smaller) or not as an adult (as defined in 49 CFR part 572, subpart O), and for the driver, the classification of the driver as being a 5th percentile female (as defined in 49 CFR Part 572, subpart O) or larger.

* * * * *

Service brake, on or off means the status of the device that is installed in or connected to the brake pedal system to detect whether the pedal was pressed. The device can include the brake pedal switch or other driver-operated service brake control.

* * * * *

Time zero means whichever of the following occurs first:

(1) For systems with ''wake-up'' air bag control systems, the time at which the occupant restraint control algorithm is activated; or

(2) For continuously running algorithms,

(i) The first point in the interval where a longitudinal cumulative delta-V of over 0.8 km/h (0.5 mph) is reached within a 20 ms time period; or

(ii) For vehicles that record ''delta-V, lateral,'' the first point in the interval where a lateral cumulative delta-V of over 0.8 km/h (0.5 mph) is reached within a 5 ms time period; or

(3) Deployment of a non-reversible deployable restraint.

* * * * *

§ 563.6 Requirements for vehicles.

Each vehicle equipped with an EDR must meet the requirements specified in § 563.7 for data elements, § 563.8 for data format, § 563.9 for data capture, § 563.10 for crash test performance and survivability, and § 563.11 for information in owner's manual.

§ 563.7 Data elements.

(a) *Data elements required for all vehicles.* Each vehicle equipped with an EDR must record all of the data elements listed in Table I, during the interval/time and at the sample rate specified in that table.

TABLE I—DATA ELEMENTS REQUIRED FOR ALL VEHICLES EQUIPPED WITH AN EDR

Data element	Recording interval/time [1] (relative to time zero)	Data sample rate (samples per second)
Delta–V, longitudinal	0 to 250 ms, or 0 to End of Event Time plus 30 ms, whichever is shorter.	100
Maximum delta–V, longitudinal.	0 to 300 ms, or 0 to End of Event Time plus 30 ms, whichever is shorter.	N/A
Time, maximum delta–V	0 to 300 ms, or 0 to End of Event Time plus 30 ms, whichever is shorter.	N/A
Speed, vehicle indicated	−5.0 to 0 sec	2
Engine throttle, % full (or accelerator pedal, % full).	−5.0 to 0 sec	2
Service brake, on/off	−5.0 to 0 sec	2
Ignition cycle, crash	−1.0 sec	N/A